Met Office

NEWS

A look back at the weather and climate in 2020

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2020 has been a year of extremes with the wettest February on record, the sunniest spring, a heatwave in the summer and a day in October breaking rainfall records.

With just a few days left to go, 2020 looks likely to be the 3rd or 4th warmest on record depending on how cold the rest of the year turns out to be (full years statistics published 4th January 2021). This makes it clear that the general trend of warming as a consequence of climate change is being seen, not just at a global level, but in our own national temperature records.

Not only will 2020 be one of the top five hottest on record for the UK, but also it will be one of the top ten wettest and the top ten sunniest years.

Provisional early end of year statistics 1 Jan 2020 to 28th Dec 2020

Area	Mean Temp (24 hour average)		Rainfall		Sunshine	
	C	Difference from average	mm	% compared to average	Hours	% compared to average
UK	9.7	0.8	1302	113	1490	109
England	10.7	1.0	951	111	1675	112
Wales	10.0	0.9	1674	115	1467	105
Scotland	8.1	0.7	1786	114	1229	104
Northern Ireland	9.4	0.4	1297	115	1297	101

Winter 2019/20 was the 5th wettest on record (data back to 1862) for the UK, as well as the 5th mildest. The strong jet stream high in the atmosphere, was directed toward the UK and allowed a succession of Atlantic low pressure systems to push across the UK, including named Storms Ciara, Dennis and Jorge, bringing wet and windy weather in February.

The most noteworthy winter month was February, due to a rapid succession of named storms, rainfall totals were well above normal virtually everywhere, with many places getting more than three times their expected average. It was the wettest February on record (records back to 1862) with the UK recording 237% of its average rainfall. It was also the fifth wettest of any calendar month on record.

Dr Mark McCarthy, head of the Met Office's National Climate Information Centre, said: "We have seen a number of exceptionally wet winters in the last decade, and due to climate change, we expect UK winters to become wetter. Of the top ten wettest winters, four have occurred since 2007 and seven since 1990 while there has been a 17% increase in the total rainfall from extremely wet days. In just over a decade we have now seen the UK's wettest February (2020), April (2012), June (2012), November (2009) and December (2015), remarkably new national records in five out of twelve months."

Spring 2020

After what was a notably wet winter, there was a marked change to much drier and more settled weather patterns in mid-March, and the UK had a record-breaking sunny spring. It proved to be the sunniest spring with 626.2 hours of sunshine in a series with data from 1919.

Top Spring 2020 facts

- All UK countries recorded their sunniest spring on record - records back to 1919.
- We saw more sunshine this spring than we see in most summers, with only three summer seasons being sunnier (1976, 1995, and 1989).
- It was the eighth warmest spring on record for the UK, with both England and Wales having their fifth warmest spring on record
- It was the sunniest April on record for the UK as a whole.
- It was the fifth driest spring for the UK overall, but some counties in north east England and eastern Scotland recorded their driest spring since rainfall records began in 1862.

Summer 2020

Overall, summer 2020 was warmer, wetter and duller than average with June, July and August all seeing some settled, hot spells. The highest temperature of the summer, 37.8°C, was recorded at Heathrow Airport on 31st July 2020; this made it the third hottest day ever recorded in the UK.

There was a major summer heatwave in the first half of August for England and Wales. Temperatures reached 36.4°C at Heathrow and Kew Gardens on the 7th and 34°C was exceeded somewhere in the UK on six consecutive days. There were also five 'tropical nights' on 8th, 10th, 11th, 12th, and 13th where temperatures locally remained above 20°C.

Met Office research published this summer explained that the chances of extreme high temperatures in parts of the UK are increasing and, under a high CO2 emissions scenario, by the end of the century the UK could potentially be seeing 40°C days every 3-4 years on average.

As is often the case, the hot weather ended with a thundery breakdown bringing some torrential downpours. The more unsettled and cooler conditions at the start and end of August balanced the month out resulting in a wetter and duller than average month overall.

Unseasonable weather bought Summer 2020 to a close with two named storms, Storm Ellen on August 19th and Storm Francis on August 24th. While having named storms in a summer month is not unprecedented, it is unusual to have two so close in succession.

Autumn 2020

The new storm names for 2020/21 were released at the start of autumn, a season which saw a variety of weather. Overall, the season was marginally warmer than average, while a relatively sunny and dry September gave way to a dull and wet October balancing out rainfall and sunshine for the autumn overall.

There were some fine, warm days in September, which was drier and sunnier than average for most places.

October was mainly wet and dull, especially in the first half of the month. Storm Alex (Oct 2nd), named by MeteoFrance, marked the start of October and moved into southern Europe where it caused severe flooding. October 3rd was an exceptionally wet day with enough rain falling across the country to fill Loch Ness.

Dr Mark McCarthy said: "In climate statistics, 2019 will be remembered for the UK's hottest day, whereas 2020 will be associated with rainfall records. Saturday 3 October, the day which followed Storm Alex, provisionally holds the record for the UK's wettest day on record, in data stretching back to 1891 – that's over 47,000 days. Remarkably 2020 also has the 3rd wettest day with the rainfall associated with storm Dennis in February."

There were two other named storms in October, mid- month saw Storm Barbara (Oct 19th), mainly affecting Iberia, while Storm Aiden blew the month out (Sat 31st).

November was generally mild, with fewer frosts than usual.

Winter 2020/21 so far

December has been generally unsettled and mild but with some colder interludes. Some eastern areas had exceeded their normal December rainfall by the middle of the month. While very wet weather affected parts of south-west England and south Wales just after mid-month.

Heavy rains led to flooding in Bedfordshire on Christmas Eve with homes being evacuated and Storm Bella brought more heavy rain and strong winds to parts of the UK on December 26th with a wind gust of 106 mph being recorded on the Isle of Wight, and the highest gust recorded in 2020.

Christmas 2020 was officially a white Christmas with parts of Suffolk, Cambridgeshire, Yorkshire and Northumberland seeing snowfall on the 25th. However, snow days are becoming increasingly rare in the UK; bad news if you enjoy a white Christmas. Only four Christmases in the last 50 years have recorded widespread snow i.e. at more than 40% UK weather stations.

July saw the publication of the sixth annual State of the UK Climate report for 2019. The report revealed that the most recent decade (2010-2019) has been on average 0.9° C warmer across the UK than 1961-1990, and the 21st century so far has overall been warmer than the previous three centuries. The 2020 report will be published mid-summer 2021.

Full year statistics will be published on 4th January 2021

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